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Disclosure No. 02-1607

PTO/SB/21 (05-03)

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U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/665,219	
	Filing Date	September 17, 2003	
	First Named Inventor	Whonchee Lee	
	Art Unit	3723	
	Examiner Name	Dung V. Nguyen	
Total Number of Pages in This Submission	9*	Attorney Docket Number	108298705US

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosures: 1) Form PTO-1449; 2) Cited References (28); 3) Return Receipt Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	John M. Wechkin Registration No. 42,216
Signature	
Date	March 19, 2004

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Date: March 19, 2004

By: Stephen P. Whelan
Stephen P. Whelan

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: WHONCHEE LEE *ET AL.*
APPLICATION No.: 10/665,219
FILED: SEPTEMBER 17, 2003
FOR: **METHODS AND APPARATUS FOR
REMOVING CONDUCTIVE MATERIAL
FROM A MICROELECTRONIC SUBSTRATE**

EXAMINER: DUNG V. NGUYEN
ART UNIT: 3723
CONF. No: 6284

**Information Disclosure Statement Within Three Months of
Application Filing or Before First Action – 37 C.F.R. § 1.97(b)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Timing of Submission

This information disclosure is being filed within three months of the filing date of this application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever occurs last [37 C.F.R. § 1.97(b)]. The references listed on the enclosed Form PTO-1449 (modified) may be material to the examination of this application; the Examiner is requested to make them of record in the application.

2. Cited Information

☒ Copies of the following references are enclosed:

- ☐ All cited references
☒ References marked by two asterisks (**)

☒ This application was filed after 30 June 2003 and no copies of U.S. patents nor published applications are enclosed (See Notice of Deputy Commissioner Kunin on 11 July 2003).

- ☒ The following references are not in English. For each such reference, the undersigned has enclosed (i) a translation of the reference; (ii) a copy of a communication from a foreign patent office or International Searching Authority citing the reference, (iii) a copy of a reference which appears to be an English-language counterpart, or (iv) an English-language abstract for the reference prepared by a third party. Applicant has not verified that the translation, English-language counterpart or third-party abstract is an accurate representation of the teachings of the non-English reference, though, and reserves the right to demonstrate otherwise.
- ☐ All cited references
- ☒ The following: JP 2001077117 A1

3. Effect of Information Disclosure Statement (37 C.F.R. § 1.97(h))

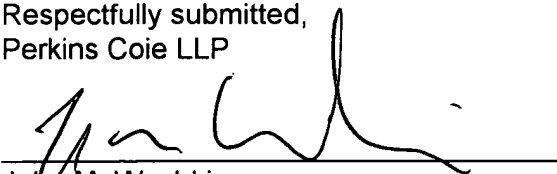
This Information Disclosure Statement is not to be construed as a representation that: (i) a search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the cited information is, or is considered to be, material to patentability. In addition, applicant does not admit that any enclosed item of information constitutes prior art to the subject invention and specifically reserves the right to demonstrate that any such reference is not prior art.

4. Fee Payment

No fees are believed due because this Information Disclosure Statement is being filed before the mailing date of the first Office Action.

However, should the Commissioner determine that fees are due in order for this Information Disclosure Statement to be considered, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0665.

Respectfully submitted,
Perkins Coie LLP



John M. Wechkin
Registration No. 42,216

Date: March 19, 2004

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT Form PTO-1449 (Modified) (Use several sheets if necessary)				COMPLETE IF KNOWN	
				Application Number	10/665,219
				Confirmation Number	6284
				Filing Date	September 17, 2003
				First Named Inventor	Whonchee Lee
				Group Art Unit	3723
				Examiner Name	Dung V. Nguyen
Sheet	1	of	6	Attorney Docket No.	108298705US

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
	**	U.S. Application No. 09/651,779 (Atty. Docket No. 10829.8515US)		Moore	Filed 08/30/2000	
	**	U.S. Application No. 09/651,808		Chopra et al.	Filed 08/30/2000	
	**	U.S. Application No. 09/653,392		Chopra et al.	Filed 08/31/2000	
	**	U.S. Application No. 09/653,411		Lee et al.	Filed 08/31/2000	
	**	U.S. Application No. 10/230,463 (Atty. Docket No. 10829.8672US)		Lee et al.	Filed 08/29/2002	
	**	U.S. Application No. 10/230,602 (Atty. Docket No. 10829.8674US)		Chopra	Filed 08/29/2002	
	**	U.S. Application No. 10/230,628 (Atty. Docket No. 10829.8673US)		Lee et al.	Filed 08/29/2002	
		2001/0025976	A1	Lee	10/04/2001	
		2001/0036746	A1	Sato et al.	11/01/2001	
		2002/0025763	A1	Lee et al.	02/28/2002	
		2002/0025760	A1	Lee et al.	02/28/2002	
		2002/0025759	A1	Lee et al.	02/28/2002	
		2002/0052126	A1	Lee et al.	05/02/2002	
		2002/0070126	A1	Sato et al.	06/13/2002	
		2003/0054729	A1	Lee et al.	03/20/2003	
		2003/0109198	A1	Lee et al.	06/12/2003	

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		NUMBER	Kind Code (if known)			
		2003/0129927	A1	Lee et al.	07/10/2003	
		2003/0226764	A1	Moore et al.	12/11/2003	
		2,315,695		Faust	04/06/1943	
		2,516,105		der Mateosian	07/25/1950	
		3,334,210		Williams et al.	08/01/1967	
		4,839,005		Katsumoto et al.	06/13/1989	
		5,244,534		Yu et al.	09/14/1993	
		5,300,155		Sandhu et al.	04/05/1994	
		5,344,539		Shinogi et al.	09/06/1994	
		5,567,300		Datta et al.	10/22/1996	
		5,575,885		Hirabayashi et al.	11/19/1996	
		5,618,381		Doan et al.	04/08/1997	
		5,676,587		Landers et al.	10/14/1997	
		5,681,423		Sandhu et al.	10/28/1997	
		5,780,358		Zhou et al.	07/14/1998	
		5,807,165		Uzoh et al.	09/15/1998	
		5,840,629		Carpio	11/24/1998	
		5,846,398		Carpio	12/08/1998	
		5,863,307		Zhou et al.	01/26/1999	
		5,897,375		Watts et al.	04/27/1999	
		5,911,619		Uzoh et al.	06/15/1999	
		5,930,699		Bhatia	07/27/1999	
		5,934,980		Koos et al.	08/10/1999	

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		NUMBER	Kind Code (if known)			
		5,952,687		Kawakubo et al.	09/14/1999	
		5,954,975		Cadien et al.	09/21/1999	
		5,954,997		Kaufman et al.	09/21/1999	
		5,972,792		Hudson	10/26/1999	
		5,993,637		Hisamatsu et al.	11/30/1999	
		6,001,730		Farkas et al.	12/14/1999	
		6,010,964		Glass	01/04/2000	
		6,024,856		Haydu et al.	02/15/2000	
		6,033,953		Aoki et al.	03/07/2000	
		6,039,633		Chopra	03/21/2000	
		6,046,099		Cadien et al.	04/04/2000	
		6,051,496		Jang	04/18/2000	
		6,060,386		Givens	05/09/2000	
		6,060,395		Skrovan et al.	05/09/2000	
		6,063,306		Kaufman et al.	05/16/2000	
		6,066,030		Uzoh	05/23/2000	
		6,066,559		Gonzalez et al.	05/23/2000	
		6,068,787		Grumbine et al.	05/30/2000	
		6,083,840		Mravic et al.	07/04/2000	
		6,100,197		Hasegawa	08/08/2000	
		6,103,096		Datta et al.	08/15/2000	
		6,103,628		Talieh	08/15/2000	
		6,115,233		Seliskar et al.	09/05/2000	

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		NUMBER	Kind Code (if known)			
		6,117,781		Lukanc et al.	09/12/2000	
		6,121,152		Adams et al.	09/19/2000	
		6,132,586		Adams et al.	10/17/2000	
		6,143,155		Adams et al.	11/07/2000	
		6,171,467	B1	Weihs et al.	01/09/2001	
		6,174,425	B1	Simpson et al.	01/16/2001	
		6,176,992	B1	Talieh	01/23/2001	
		6,180,947	B1	Stickel et al.	01/30/2001	
		6,187,651	B1	Oh	02/13/2001	
		6,196,899	B1	Chopra et al.	03/06/2001	
		6,197,182	B1	Kaufman et al.	03/06/2001	
		6,206,756	B1	Chopra et al.	03/27/2001	
		6,218,309	B1	Miller et al.	04/17/2001	
		6,250,994	B1	Chopra et al.	06/26/2001	
		6,259,128	B1	Adler et al.	07/10/2001	
		6,273,786	B1	Chopra et al.	08/14/2001	
		6,276,996	B1	Chopra	08/21/2001	
		6,280,581	B1	Cheng	08/28/2001	
		6,287,974	B1	Miller	09/11/2001	
		6,299,741	B1	Sun et al.	10/09/2001	
		6,303,956	B1	Sandhu et al.	10/16/2001	
		6,313,038	B1	Chopra et al.	11/06/2001	
		6,328,632	B1	Chopra	12/11/2001	
		6,368,190	B1	Easter et al.	04/09/2002	

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		6,379,223	B1	Sun et al.	04/30/2002	
		6,455,370	B1	Lane	09/24/2002	

FOREIGN PATENT DOCUMENTS								
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		Office	NUMBER	Kind Code (if known)				
	**	JP	2001077117	A2, A3	Sony Corp.	03/23/2001		
	**	EP	0459397	A1	Kabushiki Kaisha Toshiba	12/04/1991		
	**	WO	02/064314	A1	Speedfam-IPEC Corporation	08/22/2002		
	**	WO	00/26443	A2, A3	Nutool, Inc.	05/11/2000		
	**	WO	00/28586	A2, A3	Micron Technology, Inc.	05/18/2000		
	**	WO	00/32356	A1	Nutool, Inc.	06/08/2000		
	**	WO	00/59008	A2, A3	Nutool, Inc	10/05/2000		
	**	WO	00/59682	A1	Nutool, Inc	10/12/2000		

OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.		T
	**	ABOAF, J.A. and R.W. BROADIE, IBM Technical Disclosure Bulletin, Rounding of Square-Shape Holes in Silicon Wafers, Vol. 19, No. 8, p. 3042, January 1977, XP-002235690, NN 77013042.		
	**	ATMI, Inc., adapted from a presentation at the Semicon West '99 Low Dielectric Materials Technology Conference, San Francisco, California, July 12, 1999, pp. 13-25.		
	**	BASSOUS, E., IBM Technical Disclosure Bulletin, Low Temperature Methods for Rounding Silicon Nozzles, Vol. 20, No. 2, July 1977, pp. 810-811, XP-002235692, NN 7707810.		
	**	BERNHARDT, A.F., CONTOLINI, R.J., MAYER, S.T, "Electrochemical Planarization for Multi-Level Metallization of Microcircuitry," <i>CircuiTree Journal</i> , Vol. 8, No. 10, pp. 38, 40, 42, 44, 46, and 48, Oct. 1995.		

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	**	D'HEURLE, F.M. and K.C. PARK, IBM Technical Disclosure Bulletin, Electrolytic Process for Metal Pattern Generation, Vol. 17, No. 1, pp. 271-272, June 1974, XP-002235691, NN 7406271.		
	**	FRANKENTHAL, R.P. and EATON, D.H., "Electroetching of Platinum in the Titanium-Platinum-Gold Metallization on Silicon Integrated Circuits", <i>Journal of The Electrochemical Society</i> , Vol. 123, No. 5, pp. 703-706, May 1976.		
	**	HUANG, C.S. et al., "A Novel UV Baking Process to Improve DUV Photoresist Hardness," pp. 135-138, Proceedings of the 1999 International Symposium on VLSI Technology, Systems, and Applications: Proceedings of Technical Papers: June 8-10, 1999, Taipei, Taiwan, Institute of Electrical and Electronics Engineers, Inc., September 1999.		
	**	JUCHNIEWICZ, R. et al. "Influence of Pulsed Current of Platinised Titanium and Tantalum Anode Durability," International Congress on Metallic Corrosion, Proceedings - Volume 3, pp. 449-453, Toronto, June 3-7, 1984.		
	**	KONDO, S. et al., "Abrasive-Free Polishing for Copper Damascene Interconnection," <i>Journal of the Electrochemical Society</i> , Vol. 147, No. 10, pp. 3907-3913, The Electrochemical Society, Inc., Pennington, New Jersey, 2000.		
	**	McGraw-Hill, <i>Concise Encyclopedia of Science & Technology</i> , Sybil P. Parker, Editor in Chief, Fourth Edition, p. 367, McGraw-Hill, New York, 1998.		
	**	Micro Photonics, Inc., "CSM Nano Hardness Tester," 6 pages, retrieved from the Internet on July 29, 2002, < http://www.microphotonics.com/nht.html >.		
	**	Micro Photonics, Inc., CSM Application Bulletin, "Low-load Micro Scratch Tester (MST) for characterisation of thin polymer films," 3 pages, retrieved from the Internet on July 25, 2002, < http://www.microphotonics.com/mstABpoly.html >.		
	**	PhysicsWorld, "Hard Materials", excerpt of "Superhard Superlattices," 1 page, January 1998, S. Barnett and A. Madan, retrieved from the Internet on July 29, 2002, < http://physicsweb.org/box/world/11/1/11/world-11-1-11-1 >.		

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